

WHAT IS NEW AND DESIRED TO BE SECURED BY LETTERS PATENT
OF THE UNITED STATES IS:

1. A kit for treating a disease in a patient in need thereof, comprising a catheter means and a solution which contains an enzyme or mild detergent, wherein:

(i) said catheter means is adapted for insertion into a blood vessel and comprises a main catheter body having means including a balloon element adapted to be inserted into said vessel and expansible against the walls of said vessel so as to hold said main catheter body in place in said vessel, and means carried by said main catheter body for delivering a solution into said blood vessel; and

(ii) said solution is a physiologically acceptable solution.

2. The kit of Claim 1, wherein said solution contains, as said enzyme, at least one member selected from the group consisting of dispase, trypsin, collagenase, papain, pepsin, chymotrypsin, and lipases.

3. The kit of Claim 1, wherein said solution contains at least one member selected from the group consisting of NP-40, Triton X100, deoxycholate, and SDS.

4. The kit of Claim 1, wherein said main catheter body comprises means including two spaced balloon elements, adapted to be inserted in a blood vessel and

09458610-121099

both being expansible against the walls of the blood vessel, for providing a chamber in said blood vessel and so as to hold said main catheter body in place, and whereas said means for delivering a solution into said chamber is situated in between said balloon elements.

5. The kit of Claim 1, wherein said means for delivering said solution into said blood vessel comprises a plurality of pore means.

6. A kit for treating a disease in a patient in need thereof, comprising a catheter means and a physiologically acceptable solution, wherein:

(i) said catheter means is adapted for insertion into a blood vessel and comprises a main catheter body having means including a balloon element, adapted to be inserted in said blood vessel and being expansible against the walls of said vessel so as to hold said main catheter body in place, and means carried by said main catheter body for delivering a solution into said blood vessel;

(ii) said physiologically acceptable solution comprises at least one member selected from the group consisting of heparin, poly-L-lysine, polybrene, dextran sulfate, a polycationic material, and bivalent antibodies.

7. The kit of Claim 6, wherein said physiologically acceptable solution further comprises DNA.

09458610 121099

8. The kit of Claim 6, wherein said physiologically acceptable solution further comprises a growth factor.

9. A method for treating a disease in a patient in need thereof, comprising causing a cell attached onto the walls of a vessel or in an organ or tissue in said patient to express an exogenous therapeutic agent protein, wherein said protein treats said disease.

10. The method of Claim 9, wherein said disease is an ischemic disease, a vasomotor disease, diabetes, a malignancy, AIDS or a genetic disease.

11. The method of Claim 9, wherein said disease is a systemic disease.

12. The method of Claim 9, wherein said exogenous therapeutic agent protein is one member selected from the group consisting of tPA and modifications thereof, urokinase, streptokinase, acidic fibroblast growth factor, basic fibroblast growth factor, tumor necrosis factor α , tumor necrosis factor β , transforming growth factor α , transforming growth factor β , atrial natriuretic factor, platelet-derived growth factor, endothelial, insulin, diphtheria toxin, pertussis toxin, cholera toxin, soluble CD4 and derivatives thereof, and growth hormone.

13. The method of Claim 9, wherein said cell is selected from the group consisting of endothelial

00458610-121099

cells, vascular smooth muscle cells, fibroblasts, connective tissue cells, macrophages, monocytes, and parenchymal cells.

14. A method for treating a disease, comprising site-specifically instilling cells.

15. The method of Claim 14, wherein said cells are transformed cells.

16. The method of Claim 14, wherein said cells are normal cells.

17. A method for treating a disease, comprising site-specifically transforming cells in vivo.

in a patient

a

add A'

add D' >

add B

add E #1

09458610-121099